SCREW DEVICE FOR FIXING BONE FRACTURE PART

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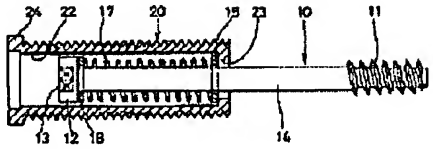
Abstract of JP8322848

PURPOSE: To prevent the occurrence of loosening in fixing and press bonding of a bone fracture part. CONSTITUTION: This screw device consists of a lug screw 10 having spiral projecting lines 11 at one end and a sleeve 20 inserted with the other end of this lug screw 10. A compression spring 17 is mounted between the collar 12 of the lug screw 10 and washer 15 to impart elasticity in the direction where the lug screw 10 is withdrawn into the sleeve 20.



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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] This invention relates to the screw equipment which fixes the fracture section.
[0002]
[Description of the Prior Art] For example, when the trochanger major of a femur suffers a fracture, screw equipment as shown in drawing 4 is used. As this equipment consists of a lag screw 1, the support arm 2, a sleeve 3, the screw 4 with a bundle, the set screw 5, and a securing screw 6 and is shown in drawing 5 Insert the support arm 2 in a femur 7 perpendicularly, and it thrusts into the condyle 8 through the fracture section 9 at slant hole 2a of the support arm 2 through a lag screw 1 from the trochanger major 7. Furthermore, a sleeve 3 is extrapolated in the back end section of a lag screw 1, the set screw 5 is screwed in from the upper limit of the support arm 2, and a sleeve 3 is fixed. And the screw 4 with a bundle is thrust into screw-thread hole 1a (drawing 4) of a lag screw 1, a lag screw 1 is drawn in a sleeve 3, and the fracture section 9 is stuck. Finally a securing screw 6 is thrust and an arm 2 is fixed.
[0003]
[Problem(s) to be Solved by the Invention] However, if inaccurate immobilization, too strong immobilization, etc. arise in case the above-mentioned fracture section 9 is made to stick by pressure on a lag screw 1 and the screw 4 with a bundle, the osteonecrosis by the interruption in the circulation or pressure arises around the fracture section, it will become the cause of looseness of immobilization and synostosis delay, synostosis incompetence, pseudoarticulation, etc. will arise.
[0004] Then, the technical problem of this invention is providing immobilization and sticking by pressure of the fracture section with the screw equipment it was made for looseness not to produce.
[0005]
[Means for Solving the Problem] In order to solve the above-mentioned technical problem, the locking device of this invention consists of the sleeve by which the other end of the lag screw which has a whorl protruding line, and this lag screw was inserted in the end section, and is characterized by making the elastic member which gives elasticity intervene in the direction which draws a lag screw in a sleeve between the other end of said lag screw, and a sleeve.
[0006]
[Function] If the lag screw is adjusted so that a lag screw may be inserted so that the bony fracture section may be straddled, a sleeve may be fixed to one side of the fracture section and an elastic member may be compressed, since a lag screw is deflected so that it may be drawn in a sleeve, the sticking-by-pressure force will always act on the fracture section, and looseness will not produce it.
[0007]
[Example] Hereafter, the example of this invention is explained based on an accompanying drawing.
[0008] As shown in drawing 1 , the screw equipment of this invention consists of a lag screw 10 and a sleeve 20, the comparatively high whorl protruding line 11 is formed, the color 12 is formed in the back end, and the crevices 13 which can be engaged in a hezagonal wrench or a screw driver, such as a hexagon-head hole and a plus hole, are established in the point of a lag screw 10 at the end face of this color 12. Moreover, washers 15 and 16 are inserted in the shaft 14 of a lag screw 10, and the compression spring 17 is attached between this washer 15 and 16. It can replace with this coil spring

17, and the member which has elasticity, such as two or more pan springs and a sealing sleeve, can be used.

[0009] The whorl protruding line 21 is formed in the periphery at said sleeve 20, although the internal through tube 22 has the path which can insert the protruding line 11 of said lag screw 10, washers 15 and 16, and a color 12, the flange 23 of the direction of the inside is formed at a tip, and the bore of this flange 23 has become smallness from the whorl protruding line 21 rather than the washer 15 in size. In addition, a sleeve 20 can be made easy to form a color 24 in the back end of a sleeve 20, to make this color 24 into a hexagon, and to rotate by the tool.

[0010] Drawing 2 shows the condition of having inserted said lag screw 10 in the sleeve 20.

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CLAIMS

[Claim(s)]
[Claim 1] Screw equipment for fracture section immobilization between which the elastic member which gives the elasticity of the direction which consists of the sleeve by which the other end of the lag screw which has a whorl protruding line, and this lag screw was inserted in the end section, and draws a lag screw in a sleeve between said lag screws and sleeves was made to be placed.
[Claim 2] It is screw equipment for fracture section immobilization according to claim 1 which the insertion and the drawer of said lag screw have become free at said sleeve, and outer fitting of the elastic member is carried out to the other end of said sleeve, and is characterized by limiting the end of this elastic member to the end of a sleeve, limiting the other end of an elastic member to the other end of a lag screw, and giving elasticity in the direction which draws a lag screw in a sleeve.

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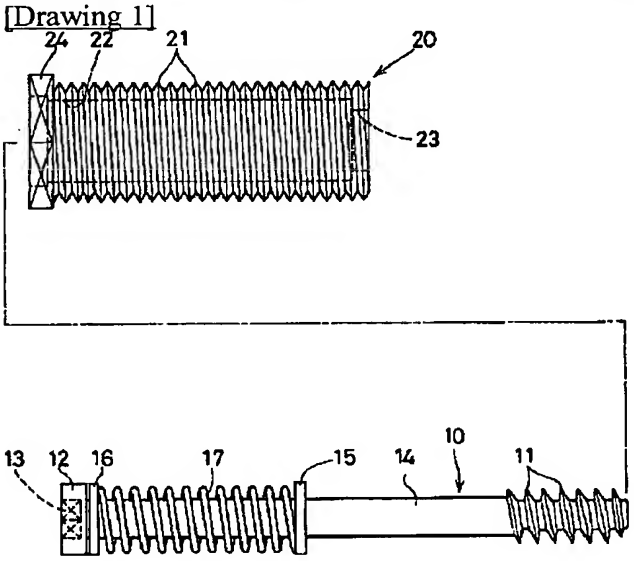
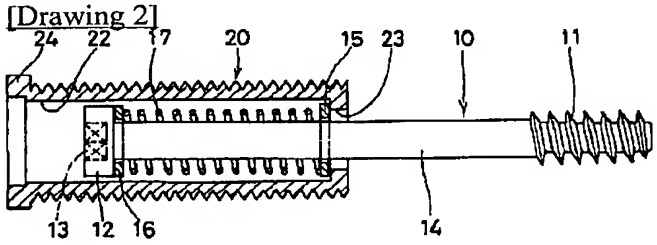
DRAWINGS

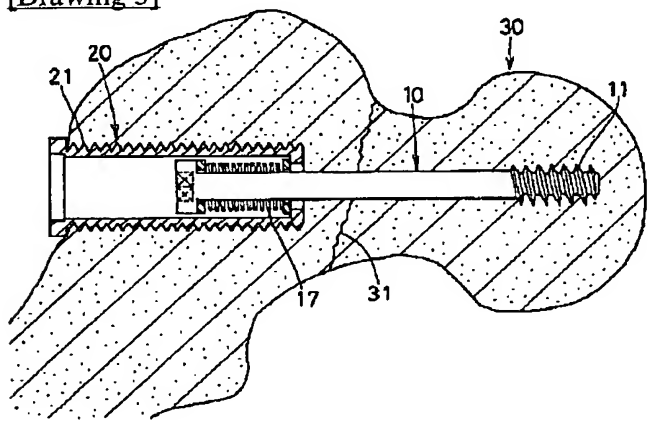
[Drawing 1]



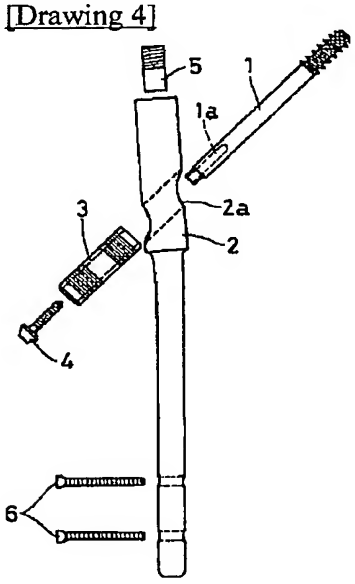
[Drawing 2]



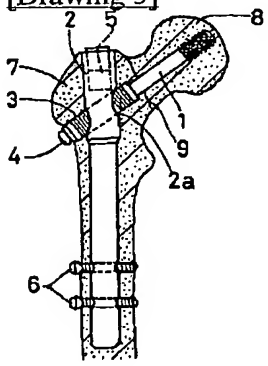
[Drawing 3]



[Drawing 4]



[Drawing 5]



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